

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising the steps of:
 - providing a first device on a first node of a communications network, the first device configured to connect to and scan I/O devices;
 - providing a second device on a second node of the communications network, the second device configured to connect to and scan the I/O devices;
 - assigning a first address to a the first node and a second address to a the second node, wherein the first address is characteristic of a primary mode of operation;
 - initiating from the first node a first communications command in a peer protocol format addressed to the second node;
 - initiating from the second node a second communications command in the peer protocol format addressed to the first node;
 - identifying the second device on the second node as a peer device within the first device on the first node responsive to receiving the second communications command at the first node;
 - identifying the first device on the first node as a peer device within the second device on the second node responsive to receiving the first communications command at the second node;
 - scanning the I/O devices by the first device on the first node;
 - determining that the first node is inoperable;
 - initiating at the second node an exchange of the first address and the second address responsive to determining that the first node is inoperable;
 - resetting a connection between the first device and the I/O devices responsive to determining that the first node is inoperable; and
 - assigning the first address to the second node and the second address to the first node responsive to initiating the exchange.

2. (Original) The method of claim 1 wherein the peer protocol format is a programmable logic controller (PLC) format.

3. (Original) The method of claim 1 wherein the peer device is a programmable logic controller (PLC) device.

4. (Original) The method of claim 1 wherein the peer protocol format is Modbus.

5. (Original) The method of claim 1 wherein the standard communications network is Ethernet.

6. (Original) The method of claim 1 further comprising the step of:
after initiating from the first node a first communications command in a peer protocol format to the second node, responding to the first communications command from the second node to the first node.

7. (Original) The method of claim 1 further comprising the step of:
after initiating from the second node the second communications command in the peer protocol format to the first node, responding to the second communications command from the first node to the second node.

8. (Original) The method of claim 1 further comprising the steps of:
setting the first node to an active status; and
setting the second node to a passive status.

9. (Currently Amended) A device scanner for a first device located on a first node of a standard communications network configured to connect to and scan I/O devices on a communications network, the device scanner comprising:

a network module for receiving a first address assigned to the first node, wherein the first address is characteristic of a primary mode of operation;

an initiator for initiating a first communications command in a peer protocol format addressed to a second node;

a receptor for receiving from the second node a second communications command in the peer protocol format, in response to the first communications command,

and for receiving from the second node a communications command to exchange the first address with a second address assigned to the second node; and

an identifier for identifying a second device on the second node as a peer device,
wherein the network module is configured to reset connections from the device scanner to the I/O devices prior to exchange of the first address with the second address such that the first node is assigned the second address responsive to the exchange.

10. (Original) The device scanner of claim 9 further comprising a scan table for storing parameters relating to the devices, the scanner using one or more of the parameters for scanning the devices.

11. (Original) The device scanner of claim 9 wherein the second device identifies the first device on the first node as a peer device.

12. (Original) The device scanner of claim 9 wherein the peer protocol format is a programmable logic controller (PLC) format.

13. (Original) The device scanner of claim 9 wherein the peer device is a programmable logic controller (PLC) device.

14. (Original) The device scanner of claim 9 wherein the peer protocol format is Modbus.

15. (Original) The device scanner of claim 9 wherein the standard communications network is Ethernet.

16. (Original) The device scanner of claim 9 wherein after the device scanner initiates the first communications command, the second node responds to the first communications command to the first node.

17. (Original) The device scanner of claim 9 wherein the after the second communications command is received by the first node, the device scanner responds to the second communications command to the second node.

18. (Original) The device scanner of claim 9 wherein after the second device on the second node is identified as a peer device, the first node is set to an active status, and the second node is set to a passive status.

19. (Withdrawn) An apparatus for communication with at least one device which resides on a standard communications network using a standard communications protocol, comprising:

a scanner for scanning the devices;

a device scan table for storing data relating to the devices, the scanner using the data in the device scan table relating to the device to scan the device;

a standard communications interface for interfacing between the scanner and the device on the standard communication network using the standard communication protocol; and,

a scan parameter indicating the application of the scan.

20. (Withdrawn) The apparatus of claim 19 wherein the scan parameter indicates a number of devices to be scanned by the device scanner.

21. (Withdrawn) The apparatus of claim 19 wherein the scan parameter indicates a device type.

22. (Withdrawn) The apparatus of claim 19 wherein the scan parameter indicates a location for storing and retrieving data for the devices.

23. (Withdrawn) The apparatus of claim 22 wherein the scan parameter indicates a length of the stored data and the retrieved data.

24. (Withdrawn) The apparatus of claim 19 wherein the standard communications network is an Ethernet network.

25. (Withdrawn) The apparatus of claim 19 wherein the standard communications network is TCP.

26. (Withdrawn) The apparatus of claim 19 wherein the programmable logic controller (PLC) communication protocol is communicated over the standard communications protocol.

27. (Withdrawn) The apparatus of claim 19 wherein the standard communications network provides communication between the device scanner and the devices.

28. (Withdrawn) An apparatus for monitoring and controlling input and output devices which reside on a standard communications network using a standard communications protocol, comprising:

a scanner for scanning input and output devices;

an input/output (I/O) scan table for storing input and output data relating to the input and output devices;

a standard communication interface for interfacing between the I/O scanner and the device on the standard communication network using the standard communication protocol; and,

an I/O scan parameter indicating the application of the scan.

29. (Withdrawn) The apparatus of claim 28 wherein the I/O scan parameter indicates a number of devices to be scanned by the I/O scanner.

30. (Withdrawn) The apparatus of claim 28 wherein the scan parameter indicates whether each device is an input device, an output device, or an input and output device.

31. (Withdrawn) The apparatus of claim 28 wherein the scan parameter indicates a location for storing data from the input devices.

32. (Withdrawn) The apparatus of claim 31 wherein the scan parameter indicates a length of the stored data of the input devices.

33. (Withdrawn) The apparatus of claim 28 wherein the scan parameter indicates a location for retrieving data for the output devices.

34. (Withdrawn) The apparatus of claim 33 wherein the scan parameter indicates a length of the retrieved data of the output devices.

35. (Withdrawn) The apparatus of claim 28 wherein the standard communications network is an Ethernet network.

36. (Withdrawn) The apparatus of claim 28 wherein the standard communications network is TCP.

37. (Withdrawn) The apparatus of claim 28 wherein the programmable logic controller (PLC) communication protocol is communicated over the standard communications protocol.

38. (Withdrawn) The apparatus of claim 28 wherein the standard communications network provides communication between the device scanner and the devices.